

RECEIVED
CENTRAL FAX CENTER
MAY 01 2008

Amendment to the Claims:

1. (Previously Presented) A vacuum pump, comprising
a pump unit with a vacuum pumping set,
an operating unit connected with the pump unit for controlling it and
arranged spaced from the pump unit, and

5 transceiver modules in the pump unit and the operating unit,
respectively, for transmitting and receiving control and operational data
bidirectionally in a wireless manner, the pump unit and the operating unit being
exclusively connected with each other in a wireless manner.

2. (Previously Presented) The vacuum pump of claim 1, wherein the
pump unit comprises:

a pump control and a supervisory module for continuous supervision of
the transceiver module, the pump control switching the pumping set to a safety mode
5 when the supervisory module signals an interruption of the reception of a control
signal continuously transmitted by the transceiver module of the operating unit.

3. (Previously Presented) The vacuum pump of claim 2, wherein the
operating unit comprises:

a supervisory module continuously supervising the reception of the
transceiver module and continuously inducing the transmission of the control signal to
5 the pump unit when a fault-free reception is detected.

4. (Previously Presented) The vacuum pump of claim 1, wherein the
transceiver modules include radio modules via which a radio link between the pump
unit and the operating unit is established.

5. (Previously Presented) The vacuum pump of claim 1, wherein the
transceiver modules are infrared modules via which an infrared link between the
pump unit and the operating unit is established.

3

6. (Previously Presented) The vacuum pump of claim 1, wherein at least one of the pump unit and the operating unit includes a wireless telephone module.

7. (Previously Presented) The vacuum pump of claim 1, wherein at least one of the pump unit and the operating unit includes a position determination module.

8. (Previously Presented) A method for controlling a vacuum pump comprising a pump unit with a pumping set and an operating unit arranged spaced from the pump unit, the pump unit and the operating unit being connected with each other bidirectionally and exclusively in a wireless manner, the method comprising the steps of:

continuously transmitting signals from the pump unit to the operating unit and vice versa,

continuously supervising the reception of the operating unit signals in the pump unit and of the pump unit signals in the operating unit, and

operating the pumping set in a safety mode when an interruption of the continuous reception in at least one of the pump unit and the operating unit is detected.

9. (Previously Presented) The method of claim 8, further including:

continuously transmitting a control signal from the operating unit to the pump unit as long as a fault-free reception in the operating unit is detected,

continuously supervising the reception of the control signal in the pump unit, and

operating the pumping set in a safety mode when no control signal is received.

4

10. (Previously Presented) A vacuum pump system which performs the method of claim 8.

11. (Currently Amended) A vacuum pump system comprising:

a) a plurality of vacuum pump units, each vacuum pump unit including:

a vacuum pump,

5 an electronic vacuum pump control module for controlling operation of the vacuum pump,

a transceiver module for receiving control signals from a control unit and for sending the information signals wirelessly from the vacuum pump control module to the control unit;

10 b) ~~a central~~ an operating unit including:

a control unit for controlling ~~[[a]]~~ the plurality of vacuum pumping units,

a manual input system through which instructions are entered into the control ~~module~~ unit,

15 a display, and

a transceiver module which sends wireless control signals to each of ~~[[a]]~~ the plurality of vacuum pumping units and receives wireless information signals therefrom~~[[;]]~~

at least one vacuum pumping unit including:

20 a vacuum pump,

an electronic vacuum pump control module for controlling operation of the vacuum pump,

25 a transceiver module for receiving the control signals from the central control unit and for sending the information signals wirelessly from the vacuum pump control module to the central control unit.

12. (Currently Amended) The vacuum pumping~~—system~~ of claim 11, further including:

5 a supervisory module connected with the control module of at least one of the central control unit control module and the vacuum pump control module for causing the vacuum pump to enter a safety mode in response to an interruption in communications between the central control unit and the vacuum pumping unit.

13. (Currently Amended) The vacuum pumping~~—system~~ of claim 11, wherein the ~~central~~ control unit further includes:

a telephone module for sending maintenance and control data from the ~~central~~ operating unit to a maintenance center.

14. (Currently Amended) The vacuum pumping~~—system~~ of claim 13, wherein the telephone module operates under one of a GSM, HDCSD, GPRS, or UMTS standard and the central control unit and vacuum pumping unit transceiver modules operate according to one of a Blue Tooth and a wireless LAN IEEE 802.11 standard.

15. (Currently Amended) The vacuum pumping~~—system~~ of claim 11, wherein the ~~each~~ vacuum pumping unit further includes:

5 a GPS module which determines a location of the vacuum pumping unit, the GPS module being connected with the vacuum pump control module for communicating vacuum pumping unit position information to the central control unit.